THE GAPS

IN

MEDICAL EDUCATION:

CONSIDERED IN THE LIGHT OF THE REPORTS OF THE INSPECTORS' OF EXAMINATIONS OF THE MEDICAL COUNCIL.

A STATEMENT

BY

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ON MAY 29TH, 1889.

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Motion, May 31, 1889.

Proposed by Dr. HERON WATSON and Seconded by Dr. MOORE, and agreed to :—

"That it be referred to the Examination Committee to prepare a Summary of the Reports of the Inspectors of Examinations, and the Remarks of the Bodies inspected, considered in relation with the matters referred to in Dr. Glover's motion, and that this Summary be submitted to the Council at its next meeting, together with such comments and resolutions as the Committee may desire."

THE GAPS IN MEDICAL EDUCATION.

11. *Notice of Motion by* Dr. GLOVER, *May 29th*, 1889 :—

To direct the further attention of the Council to the Reports of the Medical Inspectors, with special reference to their bearing on the Practical Element in Medical Education, and to move that the special attention of the Examining Bodies be drawn to this bearing, and that it be an urgent Recommendation to the Bodies to require, on the part of Candidates, proof of more attention to Common Diseases, their early recognition, and their treatment.

Scant notice last year of Inspectors' Reports.

I HOPE I need not apologise for bringing the Reports of the Inspectors further under the notice of the Council.

The President will remember that I had his assurance at least once in November that in adopting the *Report of the Examination Committee* and in passing the resolution about an Operative Test in the Surgery Examination, we were not parting with our right to revert to the Reports.

I am sorry some one more able has not undertaken

the task, but for many reasons I think we ought to revert to them, especially at this meeting (one rather for the discussion of Educational questions), as the November meeting is one more particularly for questions touching the purity of the Register and of the Profession. Any authority I have in this matter is that of experience of my own defects and errors.

The Council's exclusive attention, so far, to Operative Tests.

The Council will admit that it has given, so far, its almost exclusive attention to *one* question raised in one of the Reports—the necessity for an Operative Test in Surgical Examinations — one no doubt very important, but one of great difficulty. I will only say this, that if the other Inspectors had allowed their personal opinion of the value of a particular method of examination, or Test, to rule their Report—if they had put their foot down as strongly on one or more defects in the examination, as the Inspector in Surgery did on the Operative Test, we should have had more examinations declared deficient in standard than we have. As it was, some of the examinations barely escaped a declaration of insufficiency, and even the highest were, with a cold severity, declared "sufficient." I will not here quote instances, but several in point will be remembered by the Council.

I shall confine myself almost entirely to a few practical points, leaving to others, more capable of dealing with them, some questions on which, I think,

the Inspectors may fairly expect the Council to give some indication of opinion. I will only incidentally refer to two subjects on which one or other of the Inspectors speak strongly, but of which neither the Council nor the Examination Committee have taken notice. First,

The System of Marking.

Dr. Finlay evidently regards the system of low numbers (*e.g., the Conjoint Board of England give only ten marks in each part of the Examination*) to be unfair to the candidate. The numbers are too small for nice discrimination. See passage, page 7, Appendix iv, vol. xxv. Read also lowest lines on page 187, Appendix iv, vol. xxv.

I gather that he not only thinks it hard upon the candidate that his fate should turn upon such nice numbers, but that the Inspector himself would be much assisted in judging of the comparative standard of the different bodies, if one system of marking (he recommends numerals and a percentage scale) were adopted. It is confusing to the Inspectors when each Body has a different system. Dr. Barbour, the Inspector in Midwifery, concurs as to the inconvenience of small number of marks, pages 154-155. So does the Inspector of Surgery.

There is another subject to which I only allude incidentally, *i.e.*,

The Principle of Compensation.

The Inspectors, especially Dr. Finlay and Dr. Barbour, point out the inadmissibility of the principle of compensation, or the idea that a little excellence in one set of the final subjects is to atone for deficiency in one or both of the others. They are clearly right in this contention, as the very duty of the Inspectors, or rather of the Council acting through them, according to the Act of 1886, is to ascertain the sufficiency of the standards of examination in each of the three branches of practice, *Medicine*, *Surgery*, and *Midwifery*. It is due to the Inspectors that the Council should support them in this position. But so far we have given no indication of such support.

The Use of Drugs

We come now to a few Practical Points in medical education. On this branch of the subject, I would say that the Inspectors' Report of that part of the Examinations which touches on the subject of Therapeutics is not satisfactory. We are not treated to many of the prescriptions, but the few that are given are not reassuring. I think this prescription part of the examination very significant, holding it to be more important for the ultimate usefulness of a medical student that he should know the properties and uses, and not least, the dangers of drugs—certainly, of say not less than twenty drugs, such as opium, ergot, quinine, mercury, iodide of potassium, bromide of

potassium, alcohol, purgatives, than that he should know the last deliverance of chemists on the acid of the gastric juice, or the ultimate distribution of a cutaneous nerve or artery.

Now, I ask the Council seriously if the Reports show that in these respects the examinations are satisfactory?

The Prescriptions given by the Inspectors.

There are very few prescriptions given. I do not know whether the Lords of the Privy Council studied the Inspectors' Reports very much, and the Examination Committee's Report, but if so, I think they must have been somewhat astonished, or will be astonished, if we let this subject pass without further notice. This is not a question merely of classics, or of fine latinity, but is a matter of life and death, and of doing our patients harm if we do not do them good.

The prescriptions given, were, I admit, the worst seen by the Inspectors, and mostly those of candidates who did not pass. But this is not altogether the case.

Let me give a few illustrations. Speaking of the University of Cambridge, Dr. Finlay says, (in Inspectors' Reports, Appendix iv, p. 41, vol. xxv) :—

"It only remains to be noted that in the answers to the Paper on Therapeutics and Prescriptions, the doses were for the most part given rather under than over the mark (although one Candidate prescribed a pill containing upwards of three grains of aloes to be taken three times a day); and in so far as the prescriptions were given in Latin this was often very inaccurate, notwithstanding the fact that all the Candidates, with three exceptions, were graduates in Arts."

Of prescriptions in the *London University*, two bad specimens only are given. But the Inspector says "many other instances could be given, to what depths ignorance in this matter (of Latin) may go."

This, in the *University of London*, is disappointing as respects the light thrown on defects in general education. But I am pressing the point on the Council for the light it gives on notions of treatment.

In *Edinburgh University* the prescriptions given are bad. Dr. Fraser in the reply of the University to the Inspectors, says the prescriptions given by him are not illustrations of the average prescription as the Inspector implies, but are examples of prescriptions marked unsatisfactory.

In *Glasgow University* the prescriptions given are not satisfactory, including the following : —

For the Treatment of Tapeworm :—

℞ Extracti filix mas. liquidi, ℥ss ;
Aquæ, ad ℥j.
M. Sig., The Draught.

The Inspector says :—"The prescriptions of those candidates whose papers I read, were as a rule not well done."

In the case of *University of Dublin* we have three Clinical Reports as well as *prescriptions*, two of them of successful candidates, which do not give a very high impression of the clinical or therapeutical knowledge and training of the writers.

Four candidates who *passed* failed to gain half marks in medicine (written paper and clinical), and six who passed, failed to reach the half-mark standard over the whole examination.

Coming to the *Royal University of Ireland*, Dr. Finlay gives two prescriptions, which he says may serve as *examples*. He does not say *of what* they are examples. But they certainly are very remarkable specimens, p. 177, App. iv, vol. 25. We can only afford room for one.

For Treatment of Hepatic Colic:

℞ Pulvis Kino comp granum quinque. Fiat pulvis; Mitte duas tales; Capiat unum dure dolores.

I now want particularly to direct the attention of the Council to a paragraph in the Report of Dr. Finlay on the slight importance attached to this, as I think, vital subject, by the Conjoint Board of England, I will read the paragraph from Dr. Finlay's Report on the examination in Medicine of the Conjoint Board of England, page 7, App. xiv, vol. 25 :—

The subject of Treatment very lightly regarded by the Conjoint Board of England.

"*Remarks.*—I think it would be well if more prominence were given to the subject of Treatment, which is but lightly dwelt upon in any part of the Examination. In the Written Papers four questions only out of twelve are partly taken up with this matter. At the Clinical and Oral it is not much referred to, and *the writing of prescriptions is scarcely ever proposed.* I saw only two instances, and these occurred on separate days with the same pair of Examiners, at the Clinical part of the Examination. *As a rule students write prescriptions badly, and if some knowledge of this branch of practical work were insisted upon at the Examinations, a stimulus would be given to all concerned in the matter.*"

At the very best, then, these Reports show that in the art of prescribing, in which I should include not Latinity only or chiefly, but the faculty of benefiting or injuring one's patient, the candidates are practically unexamined by the great bodies to which we look, and look with great confidence and respect in England, the Conjoint Board of the two Colleges. And the peeps which we are allowed to have into the prescribing and therapeutical notions of candidates in other Examining Bodies show that this branch of medical knowledge is neglected in favour of more recondite, but perhaps less useful, knowledge.

Narrow and unpractical range of cases used in Clinical Examinations

I now come to another point brought out strongly in these Reports, viz., the peculiar and limited nature of the cases submitted to students for Clinical Examination. We are favoured with lists of these in most of the Reports of the Medical Inspectors, and what strikes me is the very narrow and monotonous, and withal chronic and unhopeful groups of cases that constitute the material for examination, giving little idea of the variety and curability of the cases in common practice, and that make up the day's work of the general practitioner. This is nobody's fault, certainly not that

of the candidates, neither that of the hospitals, nor medical teachers, nor examiners. Our hospitals necessarily have to receive the graver cases, which are not much benefited by home treatment. No doubt these cases are not only often benefited in hospitals, but are of great interest and use from the clinical teaching point of view; but they do not make up the bulk of medical practice.

Mr. Hutchinson on the use of Rare Cases.

Mr. Hutchinson has lately taught us the use of rare diseases for the illustration of common ones, but I am sure he would be among the first to admit that to base clinical education on rare cases would be to invert the pyramid, and that the best foundation of medical education is in the close study, daily and hourly, from beginning to end, of common diseases. Let me try to show—I shall easily carry the Council with me—what strikes me, the comparative monotony and narrowness of hospital cases, and especially of those which are made the stock *material for clinical examinations*.

First, what the Cases are; secondly, what they are not.

First, I will show what these cases generally *are*; and secondly, what they are *not*.

At the Conjoint Board of England, there were at two examinations, 190 cases, of which *one-third were cardiac*. There were 14 cases of phthisis. All were chronic. Largely, they were incurable, and more interesting pathologically than *therapeutically*.

At the Apothecaries' Examination, 11 cases, of

which 6 were heart disease, 4 were phthisis. *Nearly all incurable organic cases.*

University of Oxford, 11 cases, of which 5 were phthisis, 3 diseases of heart.

University of Cambridge, 16 cases. There was a case of *acute gout;* the rest chronic, and *used twice over.*

University of Durham, 23 cases. The Inspector praises the amount and quality of material. But they were all chronic, and mostly serious and incurable.

University of London, 106 cases; only 2 not chronic. 12 *skin cases here.* Over 50 p. c. were cases of heart disease and phthisis.

We may make a note here of the number of cases to each candidate. In the London University Examination there was a little over one case. In the Victoria University there were five cases to each candidate—fifteen *cases* in all, of which four were heart cases, and three sclerosis and ataxy, *all chronic,* but perhaps one—a case of tubercular peritonitis.

Scottish Examinations.

The same chronic, organic, uncheerful character of the cases holds in the *Scottish Examinations.*

At Glasgow University there was one case of pneumonia and one of acute nephritis. But the rest were of the usual type. The want of clinical

variety culminated at Aberdeen, where the medical examination otherwise is praised by the inspector. Dr. Finlay holds up even for imitation that the value of the *clinical* is equal to that of the *written* and *oral* combined. But he notices the want of clinical material in a paragraph I should like to quote.

"*Remarks.*—There is little to be said except what is of a favourable nature regarding this Examination. It is well planned and carried out with painstaking care. It may, perhaps, be regretted that there is not a greater *variety of Clinical material available;* and as there is *a flourishing Dispensary* not far from the Infirmary, *it might be found possible to draw additional supplies* of cases (*e.g.*, of skin disease) from it. I saw no cases of skin disease examined upon at my inspection."

In Ireland the cases are of much the same character, with perhaps a little more variety.

Let us next see

What the Cases are *Not*,

What is conspicuous by its absence in the clinical cases submitted for examination? I will summarise here nearly all the cases that make up ordinary medical practice.

Enormous groups of disease ignored in the Examinations.

I think it will astonish the Council when it thinks of the enormous groups of disease that are excluded from the examinations, and largely from the *education* of students.

Only one Body, I think, examines in cases of *diseases of women* (confessedly a difficult question).

But the following momentous groups of disease have no place in these examinations and we have no proof *as far as the examinations are concerned* that the student knows anything about them.

The examinations entirely *ignore* :—

I.—Infectious diseases of all sorts.*

II.—Infantile diseases.

III.—All sorts of *ordinary* cases.

IV.—Insanity.

V.—Puerperal diseases.

VI.—Eye diseases, so important in themselves and from which so much may be learned.

VII.—Only very few Skin diseases and not one of scabies.

I think if the Lords of the Privy Council realised that we applied no practical tests of the knowledge of the candidates in these enormous and important groups of disease, they would think our mere examinations very defective as guarantees of proficiency.

Ignorance of Infectious Diseases.

It may be said that the candidates know more than the tests imply. Let us see whether there is any independent evidence on this point.

* The chances of seeing fevers at Edinburgh 70 years since were better than now, when Alison was physician to the New Town Dispensary, and attended cases. In 1838 there were no less than 2,244 cases of fever in the Royal Infirmary of Edinburgh. Between 1832 and 1840 there were never less than 650 cases a year.

Dr. Wilks's testimony.

Take the case of *Infectious diseases.* We have Dr. Wilks' testimony that a very large proportion of the men who pass the ordinary examination have not seen a case of scarlet fever, the EARLY recognition of which is so essential, and an error in which duty is so painful and serious.

The Notification System is forcing this Question to the front.

I have said before here that the system of Notification and isolation, throwing a great responsibility on medical men—and making any error in diagnosis very awkward and very public—makes the study of the early detection and diagnosis of infectious diseases more than ever imperative. It is impossible to be always right in such matters, and even the wisest physicians sometimes make mistakes. But the entire or almost entire neglect of this class of disease in medical education cannot but lead to discredit.

I have some evidence on the frequency of errors of diagnosis in infectious disease, which I think the Council will consider important. Here is an extract from the Annual Report of the Statistical Committee of the Metropolitan Asylums Board.

Evidence of statistical Committee of the Metropolitan Asylums Board.

"A third subject which concerns medical education and the important interests dependent thereon has recently again been brought under the notice of your Committee by the Report of the Superintendent of the Hospital Ships. *Your Committee cannot fail to observe the large proportion of mistakes which are*

made in the diagnosis of cases of small-pox and fever.

Dr. Birdwood. Dr. Birdwood, Medical Superintendent of the Hospital Ships in his report says :

"The other lesson seems to be that greater care should be taken in distinguishing mild attacks of small-pox from chicken-pox. It so frequently happens that the bed-fellow of a confluent small-pox case had previously had a few spots that had been mistaken for chicken-pox. There is only one way of putting that right, the medical profession should have opportunities for clinical observation placed at their disposal. Your hospitals alone are available for that purpose."*

Pneumonia is the disease which seems most frequently confounded with fever.

I shall next give the Council the experience and opinion of one of our most important provincial Medical Officers of Health. I do not give his name, as I am quoting from a letter to myself; but I will gladly show it to any member of the Council.

"Year by year we find the errors in diagnosing infectious diseases greatly on the increase. Typhus and typhoid are frequently not recognised; measles are mistaken for scarlatina or

* It is gratifying to know that partly in answer to the representations of a Deputation of the Medical Council, the President of the Local Government Board has been able to insert a clause in the Poor-law Act, 1889, authorising the use of the Metropolitan Asylums' Board Hospitals for purposes of medical instruction—as they were not available before.

vice versa. Small-pox and chicken-pox are taken one for the other, and even secondary syphilis is reported as small-pox. I can well understand the difficulties under which a diagnosis is sometimes formed, and expect a certain number to turn out in hospital different from what they have been reported, but young men now seem to have no knowledge whatever of infectious disease until they get into practice, and then I am sorry for the patients. Last year 46 cases were reported as small-pox, of which

27 only turned out such,
14 were chicken-pox,
1 measles,
1 scarlatina,
2 Not infectious.

I think then, I have shown first, that no serious attempt is made, or even possible, in our general hospitals to teach students infectious diseases, and secondly, that when they come to the examinations, they are not tested in them, and thirdly that when they come to the great examinations and tests of practice, they are found wanting.

Mental Diseases.

In regard to Mental Diseases, I think if I had not trespassed so long on the time of the Council I could show that the actual experience of men in that specialty shows that the defects of medical education are apparent in after life, and often serious. Let me adduce one piece of evidence on the want of attention to mental disease from a very capable writer in the *Lancet* of May 11th, p. 953, Dr. G. Thompson, of Stapleton.

"This leads me to a question which is of much more serious import than that hopeless discussion of the possible 'hospital'

cure for incurable lunatics. It is that the mischief is *done before the cases come to the notice of those who are competent to treat them.* The epileptic, who fifty years ago passed easily through life without giving his friends anxiety, except as to his own personal safety, is now driven wild and uncontrollable by being drenched with bromide of potassium, obtained chiefly at the out-patient departments of the Hospitals and Dispensaries. A form of *Bromomania* is now a well recognised condition in epileptics admitted to asylums. *General Paralytics* are never discovered until they reach an asylum, when functional disturbance has led to organic disease, and stress of symptoms, distressing enough alone, is the cause of their being sent there at all. The ignorance of mental diseases that prevails outside of asylums is truly lamentable ; and nothing better can be expected until every medical man is compelled to learn something of insanity."

I have not time to dwell on the want of any chance of seeing other and deeply important diseases, notably *Puerperal Diseases.**

Infantile Diseases.

Eye Disease.

Skin Disease.

Examiations ignore a large proportion of the cases of ordinary practice. Curriculum does practically the same.

In all the Clinical Examinations there was not one case of Scabies. But I cannot dilate, I only repeat that the Reports of the Inspectors show that great groups of disease are largely ignored in the Examinations, and the result is often most painful to the practitioner and injurious to the patient.

We may ignore these facts, but they will be re-

* The Medical Council itself has not ventured further in regard to Practical training in Midwifery than to require proof of attendance on 12 cases.

garded by others, with no more responsibility than we have, and they will be altered, whether we give ourselves the trouble or not; it certainly is our primary duty to see that they are altered. It cannot be right that we should be satisfied with Examinations that take no notice of a large proportion of the cases of ordinary practice, and a curriculum that practically does the same.

The reputation of the Profession calls for an improvement of medical education in this respect. I have less faith in other remedies for the hardships and competition of which medical men complain, than in the cultivation of their own readiness and ability to detect and cope with disease.

In some subjects Examination is impossible.

I wish to make one thing clear to the Council. There are points and duties in respect to which the Bodies cannot EXAMINE candidates, such as the management of a Midwifery case, the diagnosis of Scarlet Fever while the symptoms are early and slight; the management of an infantile diarrhœa; the detection and treatment of a Pneumonia.

Practical Education must be trusted.

You must in regard to such subjects rely not so much on Examination as on Education. You must exact proofs that the Candidate has, at least, had good chances of learning what I will call in a high sense, "his business."

I have, in conclusion, to say one word more.

Pupilage alone will not suffice to fill this gap.

I have not expressed anything as to the particular

way in which the *hiatus* in Medical Education is to be filled up. There is an impression abroad that my only panacea for it is a revival of the old pupilage. This is not the case, I do believe that a limited pupilage at the right time in Medical Education would be most valuable, and would supply the student with chances that he cannot otherwise get, but it is obvious that this is only one of many ways of getting at that practical familiarity with disease and duty, on which the success of the Practitioner and the reputation of the Profession depend, and I look quite as much to special Clinical Teaching in *Lying-in Hospitals, in Special Clinics*, such as those for Diseases of Children, the Ophthalmic, Gynæcological, and Infectious Diseases, and to that restriction of that excessive systematic Lecturing which this Council has decided is required, so that more time may be given for practical and clinical work.

I do not know what view the Council will take of my motion. But, surely, if we have one duty to perform in coming here it is to see that such defects in Medical Education as are now brought to light are duly noted, and remedied.

Inspectors' Reports no good, unless we use them, and take our own share of blame for Defects in Medical Education.

There is no use in receiving Inspectors' Reports, if we do not extract the lessons from them, and take to ourselves any fair share of blame for glaring defects in Medical Education.